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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/642,575	08/21/2000	Richard D. Gunlock	P00-3223	8711

7590
06/16/2004
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EXAMINER

TON, ANTHONY T

ART UNIT PAPER NUMBER

2661

DATE MAILED: 06/16/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/642,575

Applicant(s)

GUNLOCK, RICHARD D.

Examiner

Anthony T Ton

Art Unit

2661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2004.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-9 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 29 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. **Claims 1-9** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a) **Claim 1** recites limitation “**a storage area network**” in lines 2-3. Is this “a storage area network” different from “a storage area network” recited in **line 1**? There is insufficient antecedent basis for the limitation in the claim.

b) **Claim 4** recites limitation “**a storage area node**” in lines 2-3. Is this “a storage area node” different from “**a storage area network node**” recited in **line 1**? There is insufficient antecedent basis for the limitation in the claim.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claim 1** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Isoda et al.** (US 6,647,016) in view of **Boucher et al.** (US Patent No. 6,434,620), and further in view of **Yamaguchi** (US Patent No. 5,978,355).

In Regarding to Claim 1: The Isoda disclosed an initiator node for a storage area network, the initiator node intended to be coupled over a storage area network to at least one storage node having command queue capability, the initiator node (*see Fig. 2*) comprising:

at least one processor capable of executing instructions (*see CPU in Fig. 24 and col.6 lines 47-59*);

a memory system having stored a current queue depth (*see RAMs in Fig.24 and col.7 lines 31-51; and blocks 203a – 203d in Fig.2*), and a maximum queue depth associated with each storage node of the at least one storage node (*see denominator of block 203e in Fig 2; col.9 line 3 – col.10 line 5*);

wherein the memory system stores

instructions for limiting the number of commands queued to a storage node of the at least one storage node to the current queue depth associated with the storage node (*see col.3 lines 43-46*).

The Isoda failed to explicitly disclose wherein the memory system stores:

instructions for initializing the maximum queue depth for the at least one storage node to a value dependent on a type of the at least one storage node, and

instructions for dynamically adjusting the current queue depth associated with the storage node based upon queue refusals generated by the storage node and the maximum queue depth associated with the storage node.

The **Boucher disclosed** such instructions for initializing the maximum queue depth for the at least one storage node to a value dependent on a type of the at least one storage node (*see col.72 lines 45-54*).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to implement such instructions for initializing a maximum queue depth as taught by the Boucher throughout the management queue of the Isoda, so that a storage node can be controlled and operated properly, **the motivation being** to improve the resource using efficiency of initiators; and

Yamaguchi disclosed such instructions for dynamically adjusting the current queue depth associated with the storage node based upon queue refusals generated by the storage node and the maximum queue depth associated with the storage node (*see abstract and col.5 line 46-51: the re-assembling queue is automatically adjusted every time of occurrence*).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to implement such instructions for dynamically adjusting the current queue depth associated with the storage node based upon queue refusals generated by the storage node and the maximum queue depth associated with the storage node as taught by the Yamaguchi throughout the management queue of the Isoda, so that an initiator can be dynamically performed, **the motivation being** to improve communicating efficiency and resource using efficiency of initiators.

Allowable Subject Matter

5. **Claims 2 and 3** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. **Claims 4-9** would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

Response to Arguments

7. Applicant's arguments with respect to claims 1-9 have been considered but are moot in view of the new ground(s) of rejection.

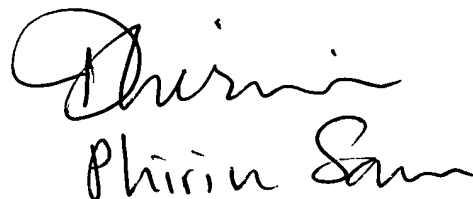
Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony T Ton whose telephone number is 703-305-8956. The examiner can normally be reached on M-F: 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas W Olms can be reached on 703-305-4703. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ATT
6/10/2004


Phirun Sam